



9.1 Morris County

This section presents the jurisdictional annex for the Morris County.

9.1.1 Hazard Mitigation Plan Point of Contact

The following individuals have been identified as the hazard mitigation plan's primary and alternate points of contact.

Primary Point of Contact	Alternate Point of Contact
Keith Heimberg Office of Emergency Management 500 West Hanover Avenue, Parsippany, NJ 07054 973-829-8600	Jeffrey Paul Office of Emergency Management 500 West Hanover Avenue, Parsippany, NJ 07054 973-829-8600

9.1.2 County Profile

Please refer to Section 4, Volume I of this Plan for details on Morris County's population, location, climate, history, growth, and development.

9.1.3 Natural Hazard Event History Specific to Morris County

Morris County has a history of natural and non-natural hazard events as detailed in Volume I, Section 5.0 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities.

9.1.4 Natural Hazard Risk/Vulnerability Risk Ranking

The table below summarizes the hazard risk/vulnerability rankings of potential hazards for Morris County.

Table 9.1-1. Hazard Risk/Vulnerability Risk Ranking

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard ^{a, c}	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking ^b
Drought	Damage estimate not available	Frequent	27	Medium
Dam Failure	Damage estimate not available	Occasional	24	Medium
Earthquake	500-year MRP: \$130,362,580 2,500-year MRP: \$2,352,428,663	Occasional	32	High
Extreme Temperature	Damage estimate not available	Frequent	18	Medium
Flood	1% Annual Chance: \$571,622,902	Frequent	18	Medium
Geological Hazards	Exposed to Class A and Class B: \$694,938,060	Frequent	18	Medium
Severe Storm	100-Year MRP: \$102,243,221 500-year MRP: \$583,667,434 Annualized: \$6,447,600	Frequent	48	High
Winter Storm	1% GBS: \$1,548,769,434 5% GBS: \$7,743,847,171	Frequent	54	High
Wildfire	Estimated Value Exposed to Extreme, Very High and High: \$840,065,289	Frequent	18	Medium
Disease Outbreak	Damage estimate not available	Frequent	36	High
Hazardous Materials	Damage estimate not available	Frequent	36	High



Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard ^{a, c}	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking ^b
Infestation	Damage estimate not available	Frequent	18	Medium

Notes:

- Building damage ratio estimates based on FEMA 386-2 (August 2001)
- The valuation of general building stock and loss estimates was based on custom inventory for the County.
High = Total hazard priority risk ranking score of 31 and above
Medium = Total hazard priority risk ranking of 20-30+
Low = Total hazard risk ranking below 20
- Loss estimates for the severe storm and severe winter storm hazards are structural values only and do not include the value of contents.
- Loss estimates for the flood and earthquake hazards represent both structure and contents.
- The HAZUS-MH earthquake model results are reported by Census Tract.

9.1.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

- Planning and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Community classification
- National Flood Insurance Program
- Integration of Mitigation Planning into Existing and Future Planning Mechanisms

Planning and Regulatory Capability

The table below summarizes the regulatory tools that are available to Morris County.

Table 9.1-2. Planning and Regulatory Tools

Tool / Program (code, ordinance, plan)	Enforcement Authority	Code Citation and Comments (code chapter, date of adoption, name of plan, explanation of authority, etc.)
Building Code	State of NJ	NJAC 5:23-3, 14
Zoning Ordinance	Municipal	NJSA 40:55D-1 et seq.
Subdivision Ordinance	Municipal	NJSA 40:55D-1 et seq.
NFIP Flood Damage Prevention Ordinance	Municipal	NJSA 40:55D-1 et seq.
Cumulative Substantial Damages	N/A	
Freeboard	N/A	
Growth Management	N/A (Advisory)	
Floodplain Management / Basin Plan	NJDEP	Executive Order 11988
Stormwater Management Plan/Ordinance	NJDEP	NJDEP Rule N.J.A.C. 7:8
Comprehensive Plan / Master Plan/ General Plan	County/Municipal	NJSA 40:27-1 et seq., NJSA 40:55D-1 et seq.
Capital Improvements Plan	County/Municipal	NJSA 40:27-1 et seq., NJSA 40:55D-1 et seq.
Site Plan Review Requirements	Municipal	NJSA 40:55D-1 et seq.
Open Space Plan	N/A (advisory)	Morris County Open Space Element, October 6, 1988
Stream Corridor Management Plan	N/A (advisory)	
Watershed Management or Protection Plan	NJDEP	Whippany River and Rockaway River
Economic Development Plan	N/A	
Comprehensive Emergency Management Plan	N/A	

**Table 9.1-2. Planning and Regulatory Tools**

Tool / Program (code, ordinance, plan)	Enforcement Authority	Code Citation and Comments (code chapter, date of adoption, name of plan, explanation of authority, etc.)
Emergency Response Plan	Morris County OEM	Emergency Operations Plan, Revised 2014
Post Disaster Recovery Plan	N/A	
Post Disaster Recovery Ordinance	N/A	
Real Estate Disclosure Requirement	N/A	
Other [Special Purpose Ordinances (i.e., critical or sensitive areas)]	N/A	

Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to Morris County.

Table 9.1-3. Administrative and Technical Capabilities

Staff/ Personnel Resources	Available (Y or N)	Department/ Agency/Position
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Y	Department of Planning and Public Works, Park Commission
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Department of Planning and Public Works, Park Commission
Planners or engineers with an understanding of natural hazards	Y	Department of Planning and Public Works
NFIP Floodplain Administrator	N	Municipal Function
Surveyor(s)	Y	Department of Planning and Public Works
Personnel skilled or trained in “GIS” applications	Y	Office of Information Technology
Scientist familiar with natural hazards in the county.	N	
Emergency Manager	Y	Office of Emergency Management
Grant Writer(s)	Y	Each Department/Agency has staff that is capable of grant writing
Staff with expertise or training in benefit/cost analysis	Y	Each County Department/Agency head is capable of conducting benefit/cost analyses
Professionals trained in conducting damage assessments	N	

Fiscal Capability

The table below summarizes financial resources available to Morris County.

Table 9.1-4. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Community Development Block Grants (CDBG)	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	No
Impact Fees for homebuyers or developers of new development/homes	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes



Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Mitigation grant programs	Yes
Other	Yes

Community Classifications

The table below summarizes classifications for community program available to Morris County.

Table 9.1-5. Community Classifications

Program	Classification	Date Classified
Community Rating System (CRS)	N/A	
Building Code Effectiveness Grading Schedule (BCEGS)	N/A	
Public Protection	N/A	
Storm Ready	NP	
Firewise	NP	

N/A = Not applicable. NP = Not participating.

The classifications listed above relate to the community's ability to provide effective services to lessen its vulnerability to the hazards identified. These classifications can be viewed as a gauge of the community's capabilities in all phases of emergency management (preparedness, response, recovery and mitigation) and are used as an underwriting parameter for determining the costs of various forms of insurance. The CRS class applies to flood insurance while the BCEGS and Public Protection classifications apply to standard property insurance. CRS classifications range on a scale of 1 to 10 with class 1 being the best possible classification, and class 10 representing no classification benefit. Firewise classifications include a higher classification when the subject property is located beyond 1000 feet of a creditable fire hydrant and is within 5 road miles of a recognized Fire Station.

Criteria for classification credits are outlined in the following documents:

- The Community Rating System Coordinators Manual
- The Building Code Effectiveness Grading Schedule
- The ISO Mitigation online ISO's Public Protection website at <http://www.isomitigation.com/ppc/0000/ppc0001.html>
- The National Weather Service Storm Ready website at <http://www.weather.gov/stormready/howto.htm>
- The National Firewise Communities website at <http://firewise.org/>

Integration of Hazard Mitigation into Existing and Future Planning Mechanisms

It is the intention of this County to incorporate hazard mitigation planning and natural hazard risk reduction as an integral component of the County's administrative, regulatory, and operational framework. A summary of how the County currently integrates hazard mitigation into daily operations is presented below. In addition, the County identified specific integration activities that will be incorporated into procedures and are included in their updated mitigation strategy.



Planning

Land Use Planning: The Department of Planning and Public Works supports local planning and seeks to integrate consideration in natural hazard risk and support mitigation project identification and implementation through its planning programs, resources, and Office of Emergency Management.

Integration of Improved Hazard Information into Existing Emergency Management Plans: The County continues to develop, enhance and implement existing emergency response plans to utilize new and developing technology/information as it becomes available. As per this plan, the County critical facility inventory was updated and new facilities were added via geo-coding to have one spatial data set for future analysis. MC OEM, FMP and Planning will research BMP's on integrating hazard mitigation in municipal master plans and land use regulations.

Morris County Flood Mitigation Program (MCFMP): The MCFMP creates site-specific Flood Acquisition Plans (FLAPs) for municipalities upon their request. FLAP contains a narrative, map and potential flood acquisition target list. Historic/current flooding trends are analyzed and flood-prone areas are designated. FLAP is developed in cooperation with municipality and presented in closed session to elected officials.

Additionally, the MCFMP obtains most current RL and SRL lists from NFIP on a regular basis; these lists typically are released twice a year (April and September).

MCFMP presents FLAPs to municipalities, including discussion of NFIP. MCOEM facilitated a presentation of the MC-FMP to municipal OEM officials. MC-FMP has presented at several conferences: ASFPM, NJAFM, ANJEC Environmental Congress, Passaic River Basin Workshop, NJ State Planning Summit, and New Jersey Land Rally to raise community awareness of flooding issues and NFIP

Hazard Mitigation: The County works with NJOEM and FEMA to incorporate any recommended revisions per review of the County's current HMP and all future plan updates which is a mitigation priority to develop a better plan for the County and participating municipalities. Future planning initiatives pursued by the Office of Emergency Management intend to incorporate hazard mitigation planning into operational plans. Additionally, critical facilities will continue to be a priority for mitigation projects. The County will continue to encourage and support municipalities to implement jurisdictional level mitigation projects and programs.

Regulatory and Enforcement

The Morris County Office of Health Management maintains and keeps accurate, updated Right to Know (RTK) files, while critical infrastructure sites are shared between the MCOEM and the County Prosecutor's Office.

MC OEM, FMP and Planning will keep up to date on the federal, state and regional agency regulations and programs affecting floodplain management.

The County HMP is a vital resource for flood mitigation. As such, the HMP will continue to affect floodplain management, zoning, subdivision regulations and other local regulations where possible and appropriate.

The County continues to ensure full and effective enforcement of building codes, floodplain management, zoning, and other risk-reducing regulations.

Operational and Administration

MCOEM continues to fortify relationships and strategic partnerships within the county, with municipalities, and with private entities to further technical aspects of mitigation and preparedness. Examples include ongoing partnerships with County GIS, Planning and Public Works, private transportation companies, and local colleges and universities.



The MC Prosecutor's Office tracks Critical Infrastructure Sites based on all types of Integrated Data. Information can be shared upon request.

Morris County continues to consolidate and incorporate relevant local data related to hazards into future planning initiatives for the County.

Morris County provides grants information, planning tools, training and technical assistance to the municipal emergency coordinators during their coordinators meeting as needed.

The County has initiated a Flood Mitigation Program (see description of program above) for the buy-out of SRL residential properties from willing sellers. The County also coordinated the submission of four successful grant applications for multi-municipal de-snagging and shoal dredging projects.

Fiscal

According to the Department of Planning and Public Works, future capital improvement projects will be evaluated to determine if they meet hazard mitigation goals and objectives. When developing upcoming transportation improvement programs, hazard mitigation actions will be funded as budget allows. Additionally, mitigation planning will continue to be incorporated into initiatives pursued by the Flood Mitigation Program.

Education and Outreach

Morris County has regularly scheduled meetings with Emergency Managers from each community. During these meetings, speakers, such as Jersey Central Power & Light, are invited to further the situational awareness of initiatives throughout the County. NJOEM is present to answer questions for the municipality and the County uses this time to update the municipal OEMs on county and regional initiatives.

In addition to the outreach presence for the municipalities, OEM regularly schedules and sponsors trainings for EMS, healthcare, and fire personnel in coordination with volunteer organizations and other County agencies. Recent examples of such initiatives include Fit Test/Respiratory Management, Emergency Preparedness for Healthcare Organizations, NFPA 1584 – Incident Rehab, and American Red Cross' Shelter Operations course. OEM also provides awareness level emergency management training to new County employees. This training includes an overview of emergency management operations in the County, tips for personal preparedness, and an opportunity for new county employees to volunteer as on-call EOC personnel during times of disaster.

Through the New Jersey Forest Fire Service (NJFFS) and NJOEM, public education and outreach is provided to the residents of Morris County.

Outreach is conducted to municipalities to ensure planning consistency among documents in relation to hazard mitigation.

The Morris County Division of Mosquito Control provides educational programs and outreach to teach people about their role in the prevention of mosquito habitats. The Division provides informational handouts on mosquito biology, mosquito control, ticks, and pesticides. Additionally, Division staff gives presentations to civic groups, public officials, and private industries. The presentations include interactive displays and handouts.

The Morris County OEM social media initiative, MCUrgent, has gained an impressive following since 2012. Facebook serves as OEM's primary daily operations social platform with a following of over 10 thousand individuals. The OEM Facebook page provides tips for emergency preparedness, updates on incidents and events around the county, and general emergency management articles for general interest. The County's Twitter page serves as a notification system to alert followers via the Twitter platform or via SMS text messaging.



9.1.6 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritization.

Past Mitigation Initiative Status

According to the 2010 Plan's FEMA crosswalk, actions that were proposed to be undertaken by Morris County were included within the jurisdiction where the county agency action is to occur. For the 2015 plan update, all previous county actions and their status are listed in the table below.

Table 9.1-6. Past Mitigation Initiative Status

Description	Status	Review Comments
1.A.1: Develop <i>All Hazards</i> public education and outreach program for hazard mitigation and preparedness.	Complete	Hazard mitigation and preparedness education initiatives will continue to be provided to the public, municipal, and county employees. This action will not be included in the 2015 HMP Update.
1.A.2: Initiate a public awareness program on local TV channel for hazard safety.	Complete	Public awareness is now successfully conducted through a combination of multiple social media initiatives. This action will not be included in the 2015 HMP Update.
1.A.3: Conduct evacuation exercises with and for local Office of Emergency Management (OEM) personnel and private citizens.	Discontinue	County does not currently have an evacuation plan. This action will not be included in the 2015 HMP Update.
1.A.4: Conduct yearly workshops related to FEMA hazard mitigation grant programs, including FMA, HMGP, PDM, SRL, and RFC, with a focus on those aspects available to private firms and property owners (coordinated with Action 1.B.1, below).	Complete	Conducted and completed. This action will not be included in the 2015 HMP Update.
1.A.5: Educate the public through NJOEM and New Jersey Forest Fire Service outreach programs and hazard mitigation workshops.	Continuous	Via NJFFS Community outreach programs. See <i>Integration of Hazard Mitigation into Existing and Future Planning Mechanisms</i>
1.B.1: Conduct yearly workshops related to FEMA hazard mitigation grant programs, including FMA, HMGP, PDM, SRL, and RFC (coordinated with Action 1.A.4, above).	Complete	Incorporated into quarterly municipal coordinator workshops. This action will not be included in the 2015 HMP Update.
1.C.1: Reach out to municipal Floodplain Administrators, departments of planning, public works, engineering, etc. regarding the importance of hazard mitigation planning and provision of municipal plans and data for planning purposes.	Continuous	Outreach is conducted to municipalities to ensure planning consistency among documents in relation to hazard mitigation. See <i>Integration of Hazard Mitigation into Existing and Future Planning Mechanisms</i>
2.A.1: Develop and maintain relationships with organizations that can provide technical information and/or assistance in the areas of hazard identification and risk assessment. e.g., incorporate information re: implementation of Risk MAP initiative as source of improved information re: flood risk in participating municipalities.	Continuous	MCOEM continues to fortify relationships and strategic partnerships within the county, with municipalities, and with private entities to further technical aspects of mitigation and preparedness. Examples include ongoing partnerships with County GIS, Planning and Public Works, private transportation companies, and local colleges and universities. See <i>Integration of Hazard Mitigation into Existing and Future Planning Mechanisms</i>
2.A.2: Undertake site-specific studies to better characterize flood risks to areas with extensive flood loss histories.	Continuous	MC Flood Mitigation Program (MC-FMP) creates site-specific Flood Acquisition Plans (FLAPs) for municipalities upon their request. FLAP contains a narrative, map and potential flood acquisition target list. Historic/current flooding trends are analyzed and flood-prone areas are designated.



Table 9.1-6. Past Mitigation Initiative Status

Description	Status	Review Comments
		FLAP is developed in cooperation with municipality and presented in closed session to elected officials. See <i>Integration of Hazard Mitigation into Existing and Future Planning Mechanisms</i>
2.A.3: Coordinate with state efforts to undertake detailed vulnerability assessments and develop mitigation options for critical facilities in V and VE zones.	Discontinue	There are no V or VE zones in Morris County; therefore, this action will not be included in the 2015 HMP Update.
2.A.4: Use best possible flood data, including DFIRM and Map Mod data, if available, in next plan update. Track implementation of Risk MAP initiative to ensure Gloucester County and municipalities gain full advantage of opportunities under this program.	Discontinue	Morris County, not Gloucester County – mistake in previous HMP; therefore, this action will not be included in the 2015 HMP Update.
2.A.5: Continuously update and verify status of repetitive loss and severe repetitive loss lists from the NFIP.	Continuous	MC-FMP obtains most current RL and SRL lists from NFIP on a regular basis; these lists typically are released twice a year (April & Sept). See <i>Integration of Hazard Mitigation into Existing and Future Planning Mechanisms</i>
2.A.6: Inventory critical facilities to identify those in geographic areas that may be prone to high ground motion during earthquakes (due to proximity to faults or to soil characteristics), and those with structures that may be at risk during an earthquake.	No progress	Minimal impact to Morris County; however, earthquakes do pose a threat to the County and this action will be revised and included in the 2015 HMP Update.
2.A.7: Coordinate with state efforts to prioritize critical facilities and conduct more detailed earthquake risk assessments, taking into account the relative importance of the facility and the level of seismic hazard.	No progress	Minimal impact to Morris County; however, earthquakes do pose a threat to the County and this action will be revised and included in the 2015 HMP Update.
2.A.8: Work with NJGS to determine soil and shake characteristics at specific sites that the county has identified as priority critical facilities with potential vulnerabilities to earthquake forces, and then work with engineers to develop appropriate projects.	No progress	Minimal impact to Morris County; however, earthquakes do pose a threat to the County and this action will be revised and included in the 2015 HMP Update.
2.A.9: Coordinate with NJGS and other county, state, and federal agencies to better identify specific sites in the county that may be exposed to the effects of geo-hazards such as landslides, sinkholes and subsidence.	No progress	Minimal impact to Morris County; however, earthquakes do pose a threat to the County and this action will be revised and included in the 2015 HMP Update.
2.A.10: Using a prioritized list of state, county, and local facilities, coordinate with state effort to survey wind vulnerabilities, based on criteria such as age of the facility, value of operations, proximity to the coast, etc.	In Progress	Waiting on state; this action will be included in the 2015 HMP Update.
2.A.11: Conduct wind risk assessments on a limited number of high-priority facilities that appear to be vulnerable to high winds. Assessments will use standard FEMA guidelines, procedures and software, including the wind hazard database.	In progress	Currently in progress; this action will be included in the 2015 HMP Update.
2.A.12: Maintain effective coordination and information sharing related to hazardous material sites with NJOEM and the Right to Know (RTK) Network.	On-Going/ Continuous	MCOHM continues to keep accurate updated RTK Files, while Critical Infrastructure Sites are shared between MCOEM, the MC Prosecutor's Office, and this Office (upon request). See <i>Integration of</i>



Table 9.1-6. Past Mitigation Initiative Status

Description	Status	Review Comments
		<i>Hazard Mitigation into Existing and Future Planning Mechanisms</i>
2.A.13: Complete data collection for Geographic Information System (GIS) analysis and mapping of potential areas of impact related to hazardous material sites.	In Progress	MCOHM does not current utilize GIS when it comes to Hazardous Materials Sites/ Locations in Morris County. This action will be included in the 2015 HMP Update.
2.A.14: Integrate data about hazardous materials with most current available information about other risk factors, e.g. population, climate, other site-specific characteristics.	On-Going / Continuous	The MC Prosecutor's Office tracks Critical Infrastructure Sites based on all types of Integrated Data. Information can be shared upon request. See <i>Integration of Hazard Mitigation into Existing and Future Planning Mechanisms</i>
2.A.15: Complete a detailed analysis of past losses related to winter storms to determine if additional study is indicated.	Complete	Provided earlier; therefore, this action will not be included in the 2015 HMP Update.
2.A.16: Undertake a survey of critical facilities to identify and prioritize those that may have structural characteristics that make them vulnerable to excessive snow and ice loads.	No Progress	No progress has been made on this action; therefore, it will be carried over into the 2015 HMP Update.
2.A.17: Complete a detailed analysis of past losses related to nor'easters and other coastal storms to determine if additional study is indicated. Work with state and federal agencies to develop a detailed characterization of erosion history and risks in particular.	Discontinue	Initiative specific to a coastal county – not Morris; therefore, this action will not be included in the 2015 HMP Update.
2.A.18: Work with appropriate agencies to identify specific areas that are vulnerable to storm effects, then inventory assets and populations in these areas as the basis for a risk calculation.	In progress	This is a continuous process and will be carried over into the 2015 HMP Update.
2.A.19: Work with NJDEP to more fully understand the dam hazard rankings and methodology behind them, particular regarding high-hazard sites.	complete	Department of Planning and Public Works maintains regular contact with NJDEP; therefore, this action will not be included in the 2015 HMP Update.
2.A.20: Undertake more detailed engineering studies of dams that may pose risks to the county, based on additional data collected from state or federal agencies.	No progress	Include in update
2.A.21: Conduct detailed risk assessments for dams that appear to have vulnerabilities, and where there is potential for significant damage or loss of life.	In progress	Include in update
2.A.22: Conduct detailed risk assessments for levees which appear to have vulnerabilities, and where there is potential for significant damage or loss of life.	Discontinue	There are currently no levees within Morris County; therefore, this action will not be included in the 2015 HMP Update.
2.A.23: Work with NJDEP and other agencies to compile better information about levees in the county, including inventories, engineering data and any other studies (in particular those that may discuss or catalog past levee failures).	Discontinue	There are currently no levees within Morris County; therefore, this action will not be included in the 2015 HMP Update.
2.A.24: Undertake more detailed engineering studies of levees that may pose risks to the county, based on additional data collected from local, state or federal agencies.	Discontinue	There are currently no levees within Morris County; therefore, this action will not be included in the 2015 HMP Update.
2.A.25: Consolidate and incorporate relevant local data related to hazards, extent, probability, exposure, risk, history, etc.	Continuous	Relevant and local data will continue to be incorporated in future planning initiatives. See <i>Integration of Hazard Mitigation into Existing and Future Planning Mechanisms</i>



Table 9.1-6. Past Mitigation Initiative Status

Description	Status	Review Comments
2.B.1: Participate in the Emergency Preparedness Conference and workshops.	Continuous	MCOEM continues to participate in multiple emergency preparedness conferences, including emergency management and EMS conferences. This action will be carried over into the 2015 HMP Update.
2.C.1: Develop a database inventory of critical facilities countywide (county-, local-, and privately-owned), including fire and police stations, medical facilities, major public buildings important for emergency response and recovery, and critical lifeline transportation and utility nodes such as bridges, water treatment plants, wastewater treatment plants, high voltage electric substations, and hazardous materials facilities.	Continuous	The County continues to develop and update a current list of critical facilities. This action will be carried over into the 2015 HMP Update.
2.C.2: Prioritize critical facilities and complete Phase I site surveys to identify vulnerabilities	Complete	Phase I site surveys completed; therefore, this action will be removed from the 2015 HMP Update.
3.A.1: Continue working with the State, as well as local jurisdictions, to encourage local cooperation in making Repetitive Loss (RL) (and SRL) property mitigation a high priority, and to offer municipalities technical support in carrying out the requirements of FEMA mitigation programs as well as current information related to RL and SRL properties.	Continuous	MC-FMP works with NJOEM and NJDEP Blue Acres and FEMA on flood mitigation acquisition projects, including providing matching grant funding. MC-FMP also provides technical support and expertise to municipalities participating in these acquisition projects; especially FEMA's SRL and HMGP grant programs. The most recent RL & SRL lists are discussed whenever MC-FMP meets with municipalities. This action will be carried over into the 2015 HMP Update.
3.A.2: Provide grants information, planning tools, training and technical assistance to increase the number of public and private sector hazard mitigation projects.	Continuous	Information provided and updated at Coordinator Meetings as needed. See <i>Integration of Hazard Mitigation into Existing and Future Planning Mechanisms</i>
3.A.3: Conduct direct outreach and education to municipal OEMs and other potential participants in Plan maintenance and future Plan updates	Continuous	Continue to provide outreach and education to municipal OEMs. This action will be carried over into the 2015 HMP Update.
3.A.4: Work with NJOEM and FEMA to incorporate "recommended revisions" per NJOEM and FEMA Region II review of this Plan into future Plan updates.	Continuous	Incorporation of "recommended revision" for this and subsequent HMPs will be a mitigation priority to develop a better HMP. See <i>Integration of Hazard Mitigation into Existing and Future Planning Mechanisms</i>
3.B.1: Conduct community outreach, workshops and training to increase NFIP participation (coordinate with outreach actions listed under Objectives 1.A and 1.B).	Continuous	MC-FMP presents FLAPs (See 2.A.2) to municipalities, including discussion of NFIP. MC-OEM facilitated a presentation of the MC-FMP to municipal OEM officials. MC-FMP has presented at several conferences: ASFP, NJ-AFM, ANJEC Environmental Congress, Passaic River Basin Workshop, NJ State Planning Summit, and NJ Land Rally to raise community awareness of flooding issues and NFIP. See <i>Integration of Hazard Mitigation into Existing and Future Planning Mechanisms</i>
3.B.2: Encourage municipalities to participate in the CRS program, including potentially setting up CRS site visits and/or workshops for interested jurisdictions.	Continuous	MC will continue to encourage municipalities to participate in CRS. This action will be carried over into the 2015 HMP Update.
3.B.3: Encourage municipalities to include identification and prioritization of actions	Continuous	See 2.A.2 and 3.B.1



Table 9.1-6. Past Mitigation Initiative Status

Description	Status	Review Comments
related to future participation in and compliance with the NFIP		
3.C.1: Encourage enforcement of floodplain management as it relates to new and existing construction by integrating hazard mitigation practices with zoning, subdivision ordinances, comprehensive planning, and other land use tools at the municipal level.	Continuous	MC OEM, FMP and Planning will research BMP's on integrating hazard mitigation in municipal master plans and land use regulations. See <i>Integration of Hazard Mitigation into Existing and Future Planning Mechanisms</i>
3.C.2: Coordinate with state efforts to encourage the New Jersey League of Municipalities to become more involved in mitigation activities, and in particular to support the activities described in Action 3.C.1 and 3.D.1.	Complete	Coordination completed; therefore, this action will not be included in the 2015 HMP Update.
3.D.1: Encourage enforcement of floodplain management as it relates to new and existing construction by integrating hazard mitigation practices with zoning, subdivision ordinances, comprehensive planning, other land use tools, and environmental and other regulatory mechanisms via state requirements, reviews, and regulations. Coordinate with the State Planning Commission to integrate the State Development and Redevelopment Plan and the State Hazard Mitigation Plan.	Continuous	MC OEM, FMP and Planning will keep up to date on the federal, state and regional agency regulations and programs affecting floodplain management. See <i>Integration of Hazard Mitigation into Existing and Future Planning Mechanisms</i>
3.E.1: Develop a simple GIS platform, or build upon an existing platform, to maintain and analyze critical facilities inventories and information about hazards.	In Progress / Continuous	County OIT/GIS has retained a Critical Infrastructure layer and the USACE National Inventory of Dams spatial data layers. Plans are to make these datasets will be viewable in a secure ArcGIS Online application for Emergency Operations Officials. Also, PDF map books of critical infrastructure and of dams will be developed via two ArcGIS data driven page map projects. MCOM and MCOIT/GIS will continue to work together to develop a database for critical facilities within the County. This action will be included in the 2015 HMP Update.
3.F.1: Explore potential for possible regionalization or consolidation of hazard mitigation planning, administration, and/or implementation at the county level	No Progress/Discontinue	Regionalization unrealistic – already incorporate municipal and county levels. This action will not be included in the 2015 HMP Update.
4.A.1: Coordinate with state efforts to develop and implement a detailed severe repetitive loss mitigation strategy that will qualify the county and municipalities for 90:10 cost share under the FEMA SRL program.	Discontinue	SRL Program has been discontinued on the federal level. New mitigation initiative will be developed with updated funding mechanism and included in the 2015 HMP Update.
4.A.2: Continue working with local and regional jurisdictions to encourage and support their efforts to mitigate RL (and SRL) properties, either individually through the use of cluster solutions and/or basin projects, as appropriate, and offer technical support in carrying out the requirements of FEMA mitigation programs.	Continuous	The County has initiated a Flood Mitigation Program for the buy-out of SRL residential properties from willing sellers. The County also coordinated the submission of four successful grant applications for multi-municipal de-snagging and shoal dredging projects. See <i>Integration of Hazard Mitigation into Existing and Future Planning Mechanisms</i>
4.A.3: Implement mitigation projects and programs intended to reduce risk to critical facilities.	Continuous	Critical facilities will continue to be a priority for mitigation projects. See <i>Integration of Hazard Mitigation into Existing and Future Planning Mechanisms</i>



Table 9.1-6. Past Mitigation Initiative Status

Description	Status	Review Comments
4.A.4: Implement other mitigation projects and programs as appropriate at the municipal level.	Continuous	The County will continue to encourage and support municipalities to implement jurisdictional level mitigation projects and programs. See <i>Integration of Hazard Mitigation into Existing and Future Planning Mechanisms</i>
4.B.1: Integrate hazard mitigation Plan and priorities into floodplain management, zoning, subdivision regulation, and other local regulations as appropriate.	Continuous	The county HMP is a vital resource for flood mitigation. As such, the HMP will continue to affect floodplain management, zoning, subdivision regulations and other local regulations where possible and appropriate. See <i>Integration of Hazard Mitigation into Existing and Future Planning Mechanisms</i>
4.B.2: Ensure full and effective enforcement of building codes, floodplain management, zoning, and other risk-reducing regulations.	Continuous	Enforcement will continue on a regular basis; see <i>Integration of Hazard Mitigation into Existing and Future Planning Mechanisms</i>
4.B.3: Integrate hazard mitigation priorities into Capital Improvement Plans, transportation planning, and other capital planning	In Progress	The County is developing a Circulation Plan Element and will be integrating hazard mitigation considerations where appropriate. This action will be included in the 2015 HMP Update.
County DPW 1: Berkshire Valley Road drainage upgrade and slope stabilization.	Completed	Drainage upgrade and slope stabilization completed; therefore, this action will not be included in the 2015 HMP Update.
County DPW 2: Morris County Bridge No. 1400-685 replacement due to inadequate hydraulic opening to stop repetitive overtopping of bridge.	Completed	Bridge replacement completed; therefore, this action will not be included in the 2015 HMP Update.
County DPW 3: Morris County Courthouse storm water run-off control upgrade.	Completed	Upgrade 100% completed; therefore, this action will not be included in the 2015 HMP Update.
County DPW 4: Morris County Sheriff's Legal Services Office storm water run-off control upgrade.	Completed	The building removed in 2014; therefore, this action will not be included in the 2015 HMP Update.
County DPW 5: Schooley's Mountain Road (County Route 517) drainage study and upgrade of storm water run-off control to stop flooding.	Completed	Slope stabilization project completed. This action will not be included in the 2015 HMP Update.
County DPW 6: Jaqui Mill Pond Dam inspection/risk assessment.	In Progress	Working through and with NJDEP on reclassification of the dam structure. This action will be included in the 2015 HMP Update.
County DPW 7: Black Brook tributary hydrology study and stream bank stabilization.	Discontinued	No future work is planned at this time; therefore, this action will not be included in the 2015 HMP Update.
County Parks 1: Dam EAP development for five Class II Dams: Leddell's Pond, Sunrise Lake, Saffin Pond, Lake George, and Canty's Lake.	Discontinued	EAPs have been developed for the Class II Dams (Leddell's Pond, Sunrise Lake, Saffin Pond, Lake George, and Canty's Lake) in Morris County. However, this action will be revised and included in the 2015 HMP mitigation initiatives.
County Parks 2: Dam EAP development for five Class III Dams: Oak Ridge, Black River, Kay Pond, Windy Hill Farm, and Loantaka Brook	Discontinued	NJ DEP does not require EAP's for Class III dams. This action will be revised and included in the 2015 HMP mitigation initiatives.

Proposed Hazard Mitigation Initiatives for the Plan Update

The County participated in a mitigation action workshop in January 2015 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).



Table 9.1-7 summarizes the comprehensive-range of specific mitigation initiatives the County would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing your actions as ‘High’, ‘Medium’, or ‘Low.’ The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.1-8 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.1-7. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
Morris County-1 (former)	Collect geologic information on seismic sources and soil conditions to gain an understanding as to what areas in the County are exposed and vulnerable to earthquakes. Develop an inventory of critical facilities that may be vulnerable to earthquake damage.	Existing	Earthquake	G-2	DP & PW	Medium	Medium	County Budget	Long Term DOF	Low	LPR	PR
Morris County-2 (former)	Collect an inventory of locations where County-owned critical facilities are vulnerable to landslides and develop a database to track the County's vulnerability to landslides.	Existing	Geological Hazards	G-2	DP & PW	Medium	Medium	County Budget	Long Term DOF	Low	LPR	PR
Morris County-3 (former)	Using a prioritized list of state, county, and local facilities, coordinate with state effort to survey wind vulnerabilities, based on criteria such as age of the facility, value of operations, etc.	Existing	Severe Weather	G-2	OEM, DP&PW State Offices	Medium	Medium	County Budget	Short Term DOF	Medium	LPR	PR
Morris County-4 (former)	Conduct wind risk assessments on a limited number of high-priority facilities that appear to be vulnerable to high winds, including facilities that serve as county emergency shelters during disaster. Assessments will use standard FEMA guidelines, procedures and software, including the wind hazard database.	Existing	Severe Weather	G-2	OEM, DP&PW	Medium	Medium	County Budget	Short Term DOF	Medium	LPR	PR
Morris County-5 (former)	Utilize GIS analysis and mapping to identify potential areas of impact	N/A	Hazardous Materials	G-2	OHM, OIT (GIS Division)	High	Medium	County Budget	Short Term DOF	Medium	LPR	PR



Table 9.1-7. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
	related to hazardous material sites.											
Morris County-6 (former)	Undertake a survey of County-owned critical facilities to identify and prioritize those that may have structural characteristics that make them vulnerable to excessive snow and ice loads.	Existing	Severe Winter Weather	G-2	DP&PW	Medium	Low	County Budget	Long Term DOF	Low	LPR	PR
Morris County-7 (former)	Work with appropriate agencies to identify specific areas that are vulnerable to storm effects, then inventory assets and populations in these areas as the basis for a risk calculation.	N/A	Severe Weather, Severe Winter Weather	G-2, G-3	OEM,DP&PW	Medium	Medium	County Budget	Long Term DOF	Medium	LPR	PR
Morris County-8 (former)	Undertake more detailed engineering studies of dams that may pose risks to the county, based on additional data collected from state or federal agencies.	Existing	Dam Failure	G-2, G-3	DP&PW	High	High	County Budget	Long Term DOF	Medium	LPR	PR
Morris County-9 (former)	Conduct detailed risk assessments for dams that appear to have vulnerabilities, and where there is potential for significant damage or loss of life.	Existing	Dam Failure	G-2, G-3	DP&PW	High	High	County Budget	Long Term DOF	Medium	LPR	PR
Morris County-10 (former)	Participate in the Emergency Preparedness Conference and workshops.	N/A	All Hazards	G-3	OEM	Medium	Low	County Budget	On-going	High	EAP	PE
Morris County-11 (former)	Develop a database inventory of critical facilities countywide (county-, local-, and privately-owned), including fire and police stations, medical facilities, major	Existing	All Hazards	G-2, G-3	OEM, All Depts.	Medium	Low	County Budget, Homeland Security Grants	Short Term DOF	Medium	LPR	PE



Table 9.1-7. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
	public buildings important for emergency response and recovery, and critical lifeline transportation and utility nodes such as bridges, water treatment plants, wastewater treatment plants, high voltage electric substations, and hazardous materials facilities.											
Morris County-12 (former)	Continue working with the State, as well as local jurisdictions, to encourage local cooperation in making Repetitive Loss (RL) (and SRL) property mitigation a high priority, and to offer municipalities technical support in carrying out the requirements of FEMA mitigation programs as well as current information related to RL and SRL properties.	Existing	Flooding	G-3	DP&PW NJOEM, NJDEP, Municipalities	High	Medium	County Budget, HMA Grants, HMGP, County Flood Mitigation Program	Long Term DOF	High	EAP LPR	PE PR
Morris County-13 (former)	Provide outreach and education to municipal OEMs on the plan maintenance of the County HMP and future plan updates.	N/A	All Hazards	G-1	OEM	Medium	Low	County Budget	On-going	High	EAP	PE
Morris County-14 (former)	Conduct municipal and community outreach, workshops and training to increase NFIP knowledge and opportunities	N/A	Flooding	G-1	DP&PW, OEM	Low	Low	County Budget	On-going	Medium	EAP	PE
Morris County-15 (former)	Encourage municipalities to participate in the CRS program, including potentially setting up CRS site visits and/or workshops for interested jurisdictions.	N/A	Flooding	G-3	DP&PW	High	Low	County Budget	Short Term	Medium	LPR	PR



Table 9.1-7. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
Morris County-16 (former)	Develop a simple GIS platform, or build upon an existing platform, to maintain and analyze critical facilities inventories and information about hazards.	Existing	All Hazards	G-2	OEM, OIT (GIS Division)	Low	Low	County Budget	Short Term DOF	Medium	LPR	PR
Morris County-17 (former)	Coordinate with state efforts to develop and implement a detailed severe repetitive loss mitigation strategy that will qualify the county and municipalities for additional floodplain management mitigation funding.	N/A	Flooding	G-2	DP&PW, NJOEM, NJDEP	Medium	Medium	County Budget	Short Term DOF	High	LPR	PR
Morris County-18 (former)	Integrate hazard mitigation priorities into Capital Improvement Plans, transportation planning, and other capital planning	N/A	All Hazards	G-3	DP&PW, Administration	Medium	Low	County Budget	Short Term	Medium	LPR	PR
Morris County-19 (old County DPW 6)	Jaqui Mill Pond Dam conduct inspection/risk assessment.	Existing	Flood Dam Failure	G-2	Park Commission	Medium	Medium	County Budget	Short Term DOF	Medium	LPR	PR
Morris County-20 Old County Parks 1	Dam EAP development for five Class III Dams in Morris County.	N/A	Dam Failure	G-3	Park Commission	High	Medium	County Budget, NJDEP grant opportunity	Long Term DOF	Medium	LPR	PR
Morris County-21 Old County Parks 2	Prepare classification reports to NJDEP for the following Class III dams: Hedden Park, Hedden Reservoir, Doland Tract and Pyramid Mountain	Existing	Dam Failure	G-2	Park Commission	Medium	Medium	County Budget	Short Term DOF	High	LPR	PR
Morris County-22	Work with the Office of Health Management to engage additional agencies	N/A	Disease Outbreak	G-3	OHM, OEM	High	Low	County Budget	Short Term DOF	Medium	LPR	PR



Table 9.1-7. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
	for input regarding traditional public health discussions, such as epidemiology or vaccinations.											
Morris County-23	Develop Memorandums of Understanding with national chain pharmaceutical companies to establish a resource for medications during disaster	N/A	All Hazards	G-4	OHM, OEM, NJOEM, NJ DOH	Low	Low	County Budget, State Agencies	Short Term DOF	Medium	LPR	PR
Morris County-24	Coordinate with municipalities to remove downed vegetative debris within a timely manner and work with Health Management to mitigate against potential infectious disease outbreaks that may occur as a result of uprooted trees.	N/A	All Hazards	G-4	DP&PW, OHM, Mosquito Control	Medium	Low	County Budget	Long Term	Low	LPR	PR
Morris County-25	Develop and conduct public outreach about Lyme Disease.	N/A	Disease Outbreak	G-1	OHM	Medium	Low	County Budget	Short Term DOF	Medium	LPR	PR
Morris County-26	Work with GIS and Fire to develop a database of hydrants throughout Morris County	N/A	Wildfire, Drought	G-2	OEM, OIT (GIS Division), Fire Coordinator	High	Low	County Budget	Short Term DOF	Medium	LPR	PR
Morris County-27	Conduct an assessment of currently identified county shelter locations to ensure Americans with Disabilities Act compliance.	Existing	Flooding, Earthquake, Severe Weather	G-3	OEM, OHM	High	Low	County Budget	Short Term	High	LPR	PR
Morris County-28	Work with municipalities to conduct outreach to local colleges and universities to increase the volunteer pool for CERT and MRC.	N/A	All Hazards	G-1	OEM, OHM	Medium	Low	County Budget	Short Term	Low	LPR	PR
Morris County-29	Develop a communication strategy for specialized messaging for populations with disabilities or access/functional needs.	N/A	All Hazards	G-1	OEM, OHM, DHS	Low	Low	Homeland Security Grants, FEMA,	On-going	High	LPR	PR



Table 9.1-7. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
								EMPG, State Agencies				
Morris County-30	Develop a list of warming and cooling centers throughout the County	N/A	Extreme Temperatures	G-2	OEM, DHS	High	Low	County Budget	Short Term	High	LPR	PR
Morris County-31	Work with Park Commission to identify and remove harmful insect colonies from County operated park lands.	N/A	Infestation	G-4	Park Commission, DP&PW	High	Medium	County Budget, NJDEP	Short Term DOF	Medium	NSP	NSP
Morris County-32	Flanders Adult Training Center (ATC) Backup Power: Install natural gas backup power to ARC Morris Flanders ATC facility (Loretta and Julius Krauklis Center). See Action Worksheet.	Existing	All hazards resulting in power outages.	G-3, 4	ARC Morris	High Maintain the critical housing services for mentally handicapped citizens throughout the County	High Est. \$130k	FEMA HMA funding; Morris ARC budget for local match	Short Term once funding is secured	High	SIP	PP, ES

Notes:

Not all acronyms and abbreviations defined below are included in the table.

*Does this mitigation initiative reduce the effects of hazards on new and/or existing buildings and/or infrastructure? Not applicable (N/A) is inserted if this does not apply.

Acronyms and Abbreviations:

CAV Community Assistance Visit
 CRS Community Rating System
 DPW Department of Public Works
 FEMA Federal Emergency Management Agency
 FPA Floodplain Administrator
 HMA Hazard Mitigation Assistance

N/A Not applicable
 NFIP National Flood Insurance Program
 NJDEP New Jersey Department of Environmental Protection
 NJOEM New Jersey Office of Emergency Management
 OEM Office of Emergency Management

Potential FEMA HMA Funding Sources:

FMA Flood Mitigation Assistance Grant Program
 HMGP Hazard Mitigation Grant Program
 PDM Pre-Disaster Mitigation Grant Program

Timeline:

Short 1 to 5 years
 Long Term 5 years or greater
 OG On-going program
 DOF Depending on funding



Costs:

Where actual project costs have been reasonably estimated:

Low	< \$10,000
Medium	\$10,000 to \$100,000
High	> \$100,000

Where actual project costs cannot reasonably be established at this time:

Low	Possible to fund under existing budget. Project is part of, or can be part of an existing on-going program.
Medium	Could budget for under existing work plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
High	Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.

Benefits:

Where possible, an estimate of project benefits (per FEMA's benefit calculation methodology) has been evaluated against the project costs, and is presented as:

Low=	< \$10,000
Medium	\$10,000 to \$100,000
High	> \$100,000

Where numerical project benefits cannot reasonably be established at this time:

Low	Long-term benefits of the project are difficult to quantify in the short term.
Medium	Project will have a long-term impact on the reduction of risk exposure to life and property, or project will provide an immediate reduction in the risk exposure to property.
High	Project will have an immediate impact on the reduction of risk exposure to life and property.

Mitigation Category:

- *Local Plans and Regulations (LPR)* – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- *Structure and Infrastructure Project (SIP)*- These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- *Natural Systems Protection (NSP)* – These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- *Education and Awareness Programs (EAP)* – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities

CRS Category:

- *Preventative Measures (PR)* - Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- *Property Protection (PP)* - These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- *Public Information (PI)* - Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.
- *Natural Resource Protection (NR)* - Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- *Structural Flood Control Projects (SP)* - Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- *Emergency Services (ES)* - Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities



Table 9.1-8. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
Morris County-1 (former)	Collect geologic information on seismic sources and soil conditions and develop an inventory of critical facilities vulnerable to earthquakes.	1	1	1	0	0	1	0	1	0	1	0	0	1	1	8	Low
Morris County-2 (former)	Collect an inventory of locations where County-owned critical facilities are vulnerable to landslides and develop a database to track the County's vulnerability to landslides.	1	1	1	0	0	1	0	1	0	1	0	0	1	1	8	Low
Morris County-3 (former)	Coordinate with state effort to survey wind vulnerabilities, based on criteria such as age of the facility, value of operations, etc.	1	1	1	0	0	1	0	1	0	1	0	0	1	1	8	Medium
Morris County-4 (former)	Conduct wind risk assessments on a limited number of high-priority facilities that appear to be vulnerable to high winds, including facilities that serve as county emergency shelters during disaster.	1	1	1	0	0	1	0	1	0	1	0	0	1	1	8	Medium
Morris County-5 (former)	Utilize GIS analysis and mapping to identify potential areas of impact related to hazardous material sites.	1	1	1	0	0	1	0	1	1	1	0	0	1	1	9	Medium
Morris County-6 (former)	Undertake a survey of County-owned critical facilities to identify and prioritize those that may have structural characteristics that make them vulnerable to excessive snow and ice loads.	1	1	1	0	1	1	0	0	0	1	0	0	1	0	7	Low
Morris County-7 (former)	Work with appropriate agencies to identify specific areas that are vulnerable to storm effects, then inventory assets and populations in these	1	1	1	0	0	1	0	1	1	1	0	0	1	1	9	Medium



Table 9.1-8. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
	areas as the basis for a risk calculation.																
Morris County-8 (former)	Undertake more detailed engineering studies of dams that may pose risks to the county, based on additional data collected from state or federal agencies.	1	1	1	0	0	0	0	1	1	1	0	0	1	1	8	Medium
Morris County-9 (former)	Conduct detailed risk assessments for dams that appear to have vulnerabilities, and where there is potential for significant damage or loss of life.	1	1	1	0	0	0	0	1	1	1	0	0	1	1	8	Medium
Morris County-10 (former)	Participate in the Emergency Preparedness Conference and workshops.	1	1	1	1	1	0	0	1	1	1	1	1	1	1	12	High
Morris County-11 (former)	Develop a database inventory of critical facilities countywide (county-, local-, and privately-owned).	1	1	1	0	0	0	0	1	1	1	0	0	1	1	8	Medium
Morris County-12 (former)	Continue working with the State, as well as local jurisdictions, to encourage local cooperation in making Repetitive Loss (RL) (and SRL) property mitigation a high priority, and to offer municipalities technical support in carrying out the requirements of FEMA mitigation programs as well as current information related to RL and SRL properties.	1	1	1	1	1	1	0	1	1	1	0	0	1	1	11	High
Morris County-13 (former)	Provide outreach and education to municipal OEMs on the plan maintenance of the County HMP and future plan updates.	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
Morris County-14	Conduct municipal and community outreach,	0	1	1	1	1	1	0	1	0	1	0	0	1	0	8	Medium



Table 9.1-8. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
(former)	workshops and training to increase NFIP knowledge and opportunities																
Morris County-15 (former)	Encourage municipalities to participate in the CRS program, including potentially setting up CRS site visits and/or workshops for interested jurisdictions.	0	1	1	0	1	1	0	0	1	1	0	1	1	1	9	Medium
Morris County-16 (former)	Develop a simple GIS platform, or build upon an existing platform, to maintain and analyze critical facilities inventories and information about hazards.	1	1	1	1	1	1	0	0	0	1	0	0	1	1	9	Medium
Morris County-17 (former)	Coordinate with state efforts to develop and implement a detailed severe repetitive loss mitigation strategy that will qualify the county and municipalities for additional floodplain management mitigation funding.	1	1	1	1	1	1	0	1	1	1	0	1	1	1	12	High
Morris County-18 (former)	Integrate hazard mitigation priorities into Capital Improvement Plans, transportation planning, and other capital planning	1	1	1	1	1	1	0	0	0	1	0	0	1	1	9	Medium
Morris County-19 (old County DPW 6)	Jaqui Mill Pond Dam conduct inspection/risk assessment.	1	1	1	0	1	0	0	1	1	1	0	0	1	1	9	Medium
Morris County-20 Old County Parks 1	Dam EAP development for five Class III Dams in Morris County.	1	1	1	0	1	0	0	1	1	1	0	0	1	1	9	Medium
Morris County-21 Old County Parks 2	Prepare classification reports to NJDEP for the following Class III dams: Hedden Park,	1	1	1	1	1	1	0	1	0	1	0	0	1	1	10	High



Table 9.1-8. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
	Hedden Reservoir, Doland Tract and Pyramid Mountain																
Morris County-22	Work with the Office of Health Management to engage additional agencies for input regarding traditional public health discussions, such as epidemiology or vaccinations.	1	0	1	1	1	1	0	0	1	1	0	0	1	1	9	Medium
Morris County-23	Develop Memorandums of Understanding with national chain pharmaceutical companies to establish a resource for medications during disaster	1	0	1	1	1	0	0	0	0	1	1	0	1	1	8	Medium
Morris County-24	Coordinate with municipalities to remove downed vegetative debris within a timely manner and work with Health Management to mitigate against potential infectious disease outbreaks that may occur as a result of uprooted trees.	1	0	1	1	1	0	0	1	0	0	0	0	1	1	7	Low
Morris County-25	Develop and conduct public outreach about Lyme Disease.	1	0	1	1	1	1	0	1	1	1	0	0	1	1	9	Medium
Morris County-26	Work with GIS and Fire to develop a database of hydrants throughout Morris County	1	1	1	1	1	1	0	0	1	1	0	0	1	1	10	Medium
Morris County-27	Conduct an assessment of currently identified county shelter locations to ensure Americans with Disabilities Act compliance.	1	0	1	1	1	1	1	0	1	1	1	1	1	1	12	High
Morris County-28	Work with municipalities to conduct outreach to local colleges and universities to increase the volunteer pool for CERT and MRC.	0	0	1	1	1	0	0	0	1	1	1	0	1	0	7	Low
Morris County-29	Develop a communication strategy for specialized	1	1	1	1	1	1	0	0	1	1	1	0	1	1	11	High



Table 9.1-8. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
	messaging for populations with disabilities or access/functional needs.																
Morris County-30	Develop a list of warming and cooling centers throughout the County	1	0	1	1	1	1	1	0	1	1	1	1	1	1	12	High
Morris County-31	Work with Park Commission to identify and remove harmful insect colonies from County operated park lands.	0	1	1	1	1	1	0	1	1	1	0	0	1	1		Medium
Morris County-32	Flanders Adult Training Center (ATC) Backup Power: Install natural gas backup power to ARC Morris Flanders ATC facility (Loretta and Julius Krauklis Center). See Action Worksheet.	1	1	1	1	1	1	0	0	1	1	1	1	1	1	12	High

Note: Refer to Section 6 which contains the guidance on conducting the prioritization of mitigation actions.



9.1.7 Future Needs To Better Understand Risk/Vulnerability

None at this time.

9.1.8 Hazard Area Extent and Location

Hazard area extent and location maps have been generated for the Morris County that illustrate the probable areas impacted within the municipality. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes. Maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Morris County has significant exposure. These maps are illustrated in the hazard profiles within Section 5.4, Volume I of this Plan.

9.1.9 Additional Comments

None at this time.